



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,828	02/17/2004	Sudhir R. Brahmhatt	22-234	9145
2746	7590	12/29/2005	EXAMINER	
WILLIAM H. EILBERG THREE BALA PLAZA SUITE 501 WEST BALA CYNWYD, PA 19004			WARE, DEBORAH K	
			ART UNIT	PAPER NUMBER
			1651	

DATE MAILED: 12/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/779,828

Applicant(s)

BRAHMBHATT, SUDHIR R.

Examiner

Deborah K. Ware

Art Unit

1651

**– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –  
Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3-6, 25 and 26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-6 and 25-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Claims 1, 3-6, and 25-26 are presented for reconsideration on the merits.

#### ***Response to Amendment***

The amendment and remarks filed October 6, 2005, have been received and entered.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### ***Claim Rejections - 35 USC § 102/103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-6 and 25-26 remain rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over EP 0 341 878, newly cited on the enclosed PTO-1449 Form.

Claims drawn to a fermentation process, the improvement comprising injecting a stream of substantially pure oxygen during fermentation process into a fermenter.

EP 0 341 878 teach a fermentation process, the improvement comprising injecting a stream of substantially pure oxygen during fermentation process into a fermenter. See the abstract. The oxygen throughout the culture is dispersed into fine bubbles and oxygenated culture is circulated and returns to the main body of the fermenter, note page 3, lines 42-44. Steps involving agitation, continuous measuring oxygen, and adjustment of flow into the vessel, recycling gas from the head space, and venting gas from the head space outside of the fermenter, are each clearly taught at page 3, lines 1-10, 28-35 and 38-48, page 4, lines 3 and 49, page 5, lines 8-9 and 49. Further, the injecting step can be performed without any blower or compressor and without mixing the oxygen with a liquid.

The claims appear to be identical to the teachings of the cited reference, and are therefore, considered to be anticipated by the reference. Any movement of the stream of substantially pure oxygen through the vessel solely due to pressure of the oxygen supply is inherent to the presence of the gas bubbles as taught by the cited reference. However, in the alternative that there is some difference between the claims and the cited reference then such difference is considered to be so slight as to render the claims obvious in the event that the claims can be interpreted to be different due to some unidentified claimed feature. One of skill would have alternatively been motivated to select for substantially pure oxygen to inject into a fermenter in order to improve a fermentation.

The results of injecting substantially pure oxygen into a fermenter would have been expected to provide successful results for improving a fermentation process. The

Art Unit: 1651

steps of agitation, continuous measuring oxygen, and adjustment of flow into the vessel, recycling gas from the head space, and venting gas from the head space outside of the fermenter, are each clearly taught at page 3, lines 1-10, 28-35 and 38-48, page 4, lines 3 and 49, page 5, lines 8-9 and 49. The reference appears to not disclose a blower or compressor nor does it disclose mixing the oxygen with a liquid. Therefore, in the alternative the claims are at least *prima facie* obvious over the cited reference.

### ***Response to Arguments***

Applicant's arguments filed October 6, 2005 have been fully considered but they are not persuasive. The argument that the present invention is different is noted, however, with respect to no pump, claim 1 does not recite this limitation. Further, the reference clearly states that a pump is for discharge and not injection, see page 2, line 36. Oxygen is disclosed to be alternatively injected into the culture vessel before it passes through the venturi. A venturi is a short tube that causes an increase in velocity of flow of a fluid and used for creating a suction. Furthermore, the presence of the oxygen gas would create pressure in the system and hence move through a culturing vessel. The oxygen is not required by the reference to mixed with liquid either, hence this argument is not deemed persuasive either. Applicants' intended meaning of the language of claim 1 to not include a pump does not remove the reference teaching wherein the pump is disclosed to be for discharge and the language of the reference does not require the pump to move the oxygen through the system, see page 2, lines 35-36. For these reasons and those of record the arguments regarding the cited reference are not deemed persuasive.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

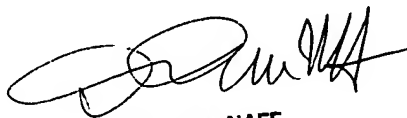
No claims are allowed. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah K. Ware whose telephone number is 571-272-0924. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1651

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Deborah K. Ware  
December 24, 2005

  
DAVID M. NAFF  
PRIMARY EXAMINER  
ART UNIT 1651